



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Hardin et al.
SERIAL NO.: 10/007,621
FILED: 12/03/01

§ ART UNIT NO.: 1645
§ EXAMINER: UNKNOWN
§ DOCKET NO.:00007/02UTL
§
§

TITLE: Enzymatic Nucleic Acid Synthesis:
Compositions and Methods for Altering
Monomer Incorporation Fidelity

§
§
§

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FEB 06 2003

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EV 192 402 080 US Express Mail Number	CERTIFICATE OF MAIL BY EXPRESS MAIL	28 January 2003 Date of Deposit
I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the:		
Assistant Commissioner of Patent BOX SEQUENCE Washington, D.C. 20231		28 January 2003 Date of Signature
Robert W. Strozier		

RESPONSE TO THE NOTICE TO COMPLY WITH SEQUENCE RULES

Dear Sir:

The Applicant hereby responds to the **Notice to Comply with Sequence Rules of 23 December 2002** and submits the following documents:

- (1) Copy of Notice to Comply with Sequence Rules;
- (2) A Substitute Paper "Sequence Listing" and an identical "Sequence Listing" in computer readable, generated by the PatentIn 3.1 Software and check by Check 3.0; and a statement of identity of sequences.
- (4) Post Card.

Respectfully submitted,

Robert W. Strozier, Reg. No. 34,024
Attorney for Applicants

Date: 28 January 2003

Response to 12-23-02 Notice to Comply with Sequence Rules

Express Mail Label No.: EV 192 402 080 US

W:\Client Files\TUVWW\VISIGEN\VisiGen02\UTL\Res to 11-22-02 Notice to Comply with Sequence Rules.wpd

ROBERT W. STROZIER, P.L.L.C.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Assistant Commissioner of Patent BOX SEQUENCE Washington, D.C. 20231		28 January 2003
Robert W. Strozier		Date of Signature

STATEMENT REGARDING SUBSTITUTE PAPER COPY OF SEQUENCE LISTING AND CRF COPY OF SEQUENCE LISTING

Dear Sir/Madam:

In response to a Notice to Comply with Sequence Rules, Applicant used the PatentIn 3.1 software for the United States Patent and Trademark Office to generate a hard copy and electronic copy of the sequence listing as required by the Notice.

Applicants' Attorney verifies that the paper and electronic listing are identical, both generated by PatentIn 3.1. Applicant has used the definitions of the sequences as set forth on Page 14 paragraph 66 (atgcctg) and Page 59 Table 1 for the remaining sequences.

Applicants' Attorney has attempted in good faith to respond to this notice; however, Applicants' Attorney must point out that at numerous parts of the specification, reference is made to specific enzymes and DNA molecules, without the actual sequences being included. Applicants did not include actual sequences because the actual sequences are not germane to this application. The application relates to functionalized dNTPs or other small molecules that increase base incorporation fidelity. The invention is not related to any specific nucleic

Page 1

Statement Regarding Substitute Paper Copy of Sequence Listing and crf Copy of Sequence Listing

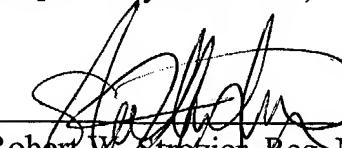
Express Mail Label No.: EV 192 402 080 US

W:\Client Files\TUVV\VISIGEN\VisiGen02\UTL\Res to 11-22-02 Notice to Comply with Sequence Rules.wpd

ROBERT W. STROZIER, P.L.L.C.

acid sequence or peptide sequence.

Respectfully submitted,



Robert W. Strozier, Reg. No. 34,024
Attorney for Applicants

Date: 28 January 2003

Page 2

Statement Regarding Substitute Paper Copy of Sequence Listing and crf Copy of Sequence Listing

Express Mail Label No.: EV 192 402 080 US

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ROBERT W. STROZIER, P.L.L.C.

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Commissioner for Patents
Washington, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/007,621	12/03/2001	Susan H. Hardin	00007/02UTL

23873
 ROBERT W STROZIER, PLLC
 2925 BRIARPARK, SUITE 930
 HOUSTON, TX 77042

CONFIRMATION NO. 9970
FORMALITIES LETTER

 OC000000009149869

Date Mailed: 12/23/2002

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS
 CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE
 DISCLOSURES**

Filing Date Granted

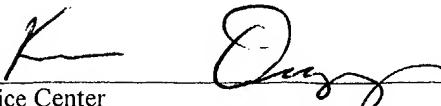
Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

A copy of this notice MUST be returned with the reply.


 Customer Service Center
 Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

DOCKETED
 BY lun DATE 1/2/03
 FOR ACTION ON FOLLOWING DAY

lun. 1/22/03

lun. 1/23/03



UNITED STATES
PATENT AND
TRADEMARK OFFICE

Commissioner for Patents
Washington, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/007,621	12/03/2001	Susan H. Hardin	000007/02UTL

23873
ROBERT W STROZIER, PLLC
2925 BRIARPARK, SUITE 930
HOUSTON, TX 77042

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FEB 06 2003
TECH CENTER 1600/2900

CONFIRMATION NO. 9970
FORMALITIES LETTER



OC000000009149869

Date Mailed: 12/23/2002

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE
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A copy of this notice MUST be returned with the reply.

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Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



Visigen-02UTL.ST25
SEQUENCE LISTING

<110> Visigen Biotechnologies, Inc.

<120> Enzymatic Nucleic Acid Synthesis: Compositions and Methods for Altering Monomer Incorporation Fidelity

<130> 00007/02PCT

<140> PCT/US01/45819

<141> 2001-12-03

<150> 60/250,764

<151> 2000-12-01

<160> 9

<170> PatentIn version 3.1

<210> 1

<211> 7

<212> DNA

<213> Artificial

<220>

<223> The sequences listed here are artificially generated DNA sequences synthesized to test fidelity of monomer incorporation due to substitution at the gamma phosphate of the dNTPS.

<220>

<221> Oligonucleotide

<222> (1)...(7)

<223> An example of an oligonucleotide discussed the in the definition section of the application.

<400> 1

atgcctg

7

<210> 2

<211> 19

<212> DNA

<213> Artificial

<220>

<223> This sequence is a primer strand for Taq DNA polymerase.

<220>

<221> primer_bind

<222> (1)...(19)

<223> Primer strand for Taq DNA polymerase

<400> 2

ggtaactaaggc ggccgcattg

19

<210> 3

<211> 20

<212> DNA

<213> Artificial

Visigen-02UTL.ST25

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a T residue at the end of the strand designate d BOT-T 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 3
ccatgattcg ccggcgtact

20

<210> 4
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a C residue at the end of the strand designate d BOT-C 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 4
ccatgattcg ccggcgtacc

20

<210> 5
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a G residue at the end of the strand designate d BOT-G 3'.

<220>
<221> Template
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<223> Anti-sense to the primer sequence 2.

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ccatgattcg ccggcgracg

20

<210> 6
<211> 20
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a A residue at the end of the strand designate

visigen-02UTL.ST25

d BOT-A 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

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ccatgattcg ccggcgtaca

20

<210> 7
<211> 23
<212> DNA
<213> Artificial

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<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a TAG residues at the end of the strand designated BOT-Sau 3'.

<220>
<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

<400> 7
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23

<210> 8
<211> 21
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a TC residues at the end of the strand designated BOT-TC 3'.

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<221> Template
<222> (1)..(19)
<223> Anti-sense to the primer sequence 2.

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ccatgattcg ccggcgtact c

21

<210> 9
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Template Strand - antisense to the primer strand of sequence 2 with the addition of a TTTC residues at the end of the strand designated BOT-3TC 3'.

<220>

Visigen-02UTL.ST25

<221> Template
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<223> Anti-sense to the primer sequence 2.

<400> 9
ccatgattcg ccggcgtact ttc

23